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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,445	10/29/2003	Frederic Fox	1481.0310000	4563

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EXAMINER	
JARRETT, SCOTT L	

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,445	FOX ET AL.	
	Examiner	Art Unit	
	Scott L. Jarrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6,7 and 10-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6,7 and 10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1 .114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1 .17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.1 14, and the fee set forth in 37 CFR 1 .17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.1 14. Applicant's submission filed on March 6, 2006 been entered.

Applicant's amendments amended claims 1-3, 6-7 and 10-20 and canceled claims 4-5, 8-9 and 21. Currently Claims 1-3, 6-7 and 10-20 are pending.

Response to Amendment

2. Applicant's amendment filed on March 6, 2006 with respect to amended claims 1-3, 6-7 and 10-20 necessitated new ground(s) of rejection.

Response to Arguments

3. Applicant's arguments with respect to claims 1-3, 6-7 and 10-20 have been considered but are moot in view of the new ground(s) of rejection.

It is noted that the applicant did not challenge the Officially Noticed fact(s) cited in the previous office action(s) therefore those statements as presented are herein after

prior art. Specifically it has been established that it was old and well known in the art at the time of the invention:

- to compare comparing internally generated (calculated, determined, estimated, etc.) values (numbers, measures, levels, etc.) to externally (third party, object, etc.) values in order to determine the degree to which the two values correspond (match, correlate, etc.) in old and very well known for providing a mechanism for users/systems to do such things as check/determine the accuracy of their calculations by comparing them to the calculations of others thereby providing a degree of confidence in the forecast/prediction if the two values are close/similar.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6-7 and 10-20 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention.

The public use or sale of the invention, a weather-based decision system for providing business recommendations based on a set of weather driven demand data sold by the Applicant (Planalytics, Strategic Weather Services) under one or more of the following product/service names: Planalytics, Planalytics Impact LR, Planalytics Impact SR, Arthur, Lewis and/or Weathernomics, is evidenced by at least the following:

I. Shutovich, Christina, When it rains, wipers pour profits: Retailers need to prepare for customers during a downpour (December 1999), herein after reference A;

II. Impact SR from Planalytics Gives Retailers New Weapon Against Weather (September 2000), herein after reference B;

III. Taming Weather's Unpredictable Impact (April 2002), herein after reference C;

IV. Strategic Weather Services Launches Planalytics (November 1999), herein after reference D;

V. Hawthorn, Chris, Weather As A Strategic Element in Demand Chain Planning (Fall 1998), herein after reference E; and

VI. Hawthorn, Chris, Sunny today, sales tomorrow (May 1999), herein after reference F.

Planalytics teaches a weather-based decision system for providing business recommendations based on a set of weather driven demand data comprising: assigning confidence levels to weather element forecasts based on the probability that a weather element forecast is accurate, assigning confidence levels to weather-driven demand data based on the strength of a correlation between product/service demand and one or more weather elements, assigning opportunity levels to weather-driven demand data based on at least the weather element forecast and weather element relationship confidence levels, determining weather decision points and providing business recommendations (reference A: Paragraphs 1-7, Page 1; "I have a high degree of confidence – meaning 85-90 percent – that a particular month is going to have 20 percent more days of rain, and I'm also confident that there's a 90-percent relationship between that and the sale of wiper blades.", Paragraph 4, Page 1; reference B: Paragraphs 1-5, Page 1; reference C: Abstract; Paragraphs 1, 3 and 6, Page 2; Paragraph 3, Page 3; "Planalytics' Impact technology uses artificial intelligence to analyze product sales data to determine the types of weather that drive consumers to buy a particular product, as well as the temperature thresholds that must be crossed in each geographic market before consumers buy that product."; reference D: Paragraphs

1-3, Page 1; reference E: Column 2, Last Paragraph, Page 18; "Four Phase Plan", Page 19; "The purpose of plotting is to correlate the sales with weather in each specific market to see if their relationship is significant, and also whether the relationship is negative or positive.", Last Paragraph, Column 1, Page 19).

Planalytics (Strategic Weather Services) further teaches a method for demand chain planning comprising a three-step approach "The following three-step plan outlines how to create a merchandising map that identifies the effects weather will have on product demand, and how to fully integrate that information into supply chain management plans.

1 The first step is to create a historical analysis. This is a history of a product's sales segmented by store location, product and product category and plotted against actual historical weather for each market area for a given period of time. This can also be used to identify any possible non-weather events that may have inflated or deflated sales, such as stock-outs, promotions, advertising or markdowns.

To begin, chart past sales and weather data in each specific market to relate sales activities to the weather. These relationships can be either positive or negative. A positive correlation indicates that the sales of the product follow the weather changes, while a negative correlation indicates that product sales move inversely with weather changes. Sales of shorts or swimsuits, for instance, increase as temperatures increase (positive), but sales of overcoats and snowshoes increase as temperatures decrease (negative).

The historical analysis will also distinguish the degree, or strength, of the correlation. Slipper sales, for example, would have a weak correlation to weather because sales are not necessarily weather sensitive. Snow boots, on the other hand, would have a strong correlation because their sales are weather sensitive and are coupled to the duration and intensity of a snowstorm. The same would be true for neckties vs. winter scarves, dress shirts vs. flannel shirts, etc.

Once the weather and sales histories are graphed, the season's starting and ending points can be identified, showing how long the merchandise season lasted. Mid-season peaks or dips in sales can also be identified.

2 The next step is to perform a missed opportunity assessment. Here, a "What if" analysis highlights those opportunities that might have been capitalized upon to sell more product had future weather been integrated into the supply chain process.

The historical analysis and the missed opportunity assessment can also contribute to the development of more-refined and better-targeted strategies for critical points in the supply chain - such as raw materials purchasing and production scheduling, advertising and promotion, allocation and distribution, receipt timing, and markdowns and clearances. In other words, those past relationships between sales and weather can help quantify the impact that future weather will have on the demand for a particular product in a particular geographic area at a particular point in time.

3 The third step, then, is to create a demand plan. This involves the application of the historic weather-sales correlations to a forward-looking, market-by-market weather forecast. This new demand plan, which incorporates a much greater understanding of

the consumer, leads to increased sales and profits." (reference F: Paragraphs 1 and 3, Page 2; "Three Steps to Successful Supply Chain Planning", Pages 3-5).

An issue of public use or on sale activity has been raised in this application. In order for the examiner to properly consider patentability of the claimed invention under 35 U.S.C. 102(b), additional information regarding this issue is required as follows: please provide the names of any products or services that have incorporated the claimed subject matter as well as information regarding their public use and/or sale (e.g. product road maps, sales presentations, investor disclosures, case studies, product manuals, product brochures, etc.), and provide a citation and a copy of each publication which any of the applicants authored or co-authored and which describe the disclosed subject matter and/or products or services.

Applicant is reminded that failure to fully reply to this requirement for information will result in a holding of abandonment.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-3, 6-7 and 10-20 are rejected under 35 U.S.C. 103(s) as being unpatentable over Smith et al., U.S. Patent Publication No. 2003/0004780 in view of Fox et al., U.S. Patent No. 5,832,456 and further in view of Shutovich, Christina, When it rains, wipers pour profits: Retailers need to prepare for customers during a downpour (December 1999).

Regarding Claim 1 Smith et al. teach a weather-based decision system for providing business recommendations (actions, plans, etc.) based on a plurality of weather (meteorological, climatological) and other business data/information (Abstract; Paragraphs 0008-0010; "...provides a means for incorporating such information (weather) into business planning in a way that will enhance the recommendation of operational solutions that can maximize quantifiable business objectives...", Paragraph 0022).

More generally Smith et al. teach a method and system for integrating a plurality of weather information into well-known enterprise systems (computer-based planning systems, decision support, enterprise planning, materials requirements, supply chain,

expert systems, etc.; Abstract; Paragraphs 0002-0007, 0018-0022; Figures 1, 2, 4 and 5 as shown below) thereby enabling businesses to make weather-adapted business decisions ("...allows weather information to be systematically considered and evaluated in the context of the extended enterprise planning environment..."; Paragraph 0010).

More specifically Smith et al. teach that the weather-based decision system comprises:

- assigning a confidence level (accuracy) to the weather driven demand data (Paragraphs 0029, 0031, 0034, 0036; 0041, 0051; 0046; Figure 2, Element 203; "The system may also be used to evaluate the value of the weather information, e.g. as a function of various accuracies...", Paragraph 0063; "...the probability with which the event will or may occur. The enterprise system, in step 313, integrates this information with relevant business process system components to make an informed decision regarding the event.", Paragraph 0031);

- assigning an opportunity level (value, parameter, measure, etc., e.g. performance goals) to the weather driven demand data (Paragraphs 0051-0054, 0064; "...the system may examine the meteorological weather forecast (including accuracy) for each potential airport in conjunction with each airport's flight capacity in order to determine whether a user should reroute his or her flight while meeting the performance goals.", Paragraph 0061);

- generating weather decision points based on the plurality of weather, demand and opportunity data (thresholds, critical decision thresholds, critical decision criteria; weather thresholds, user-defined thresholds; Paragraphs 0029, 0030, 0050-0051);

- providing business recommendations via a business rules engine (rules engine, expert system, decision support system, enterprise resource planning system, etc.; Paragraphs 0022-0023; Figure 5; "Rules may be implemented in a rule-based knowledge system (e.g. expert system) or by other means.", Paragraph 0050); and

- a business rules database ("...weather rules database, and ... business decision rules database.."; Paragraph 0033; Figure 4, Elements 401a, 403a as shown below).

Smith et al. further teach that the confidence level is based on a probability that a weather element forecast is accurate ("...may compare accuracy of the weather information...", Paragraph 0034; "Accuracy can be measured using a wide range of techniques.", Paragraph 0036; ; "...the probability with which the event will or may occur. The enterprise system, in step 313, integrates this information with relevant business process system components to make an informed decision regarding the event.", Paragraph 0031;Paragraphs 0029, 0031, 0034, 0036; 0041, 0051; 0046; Figure 2, Element 203).

Smith et al. teach the utilization of a plurality of accuracy measures (confidence levels) related to weather forecast and non-weather related information as part of the decision rules (Paragraph 0034) and that the confidence levels (accuracy) enables the system to take into account the accuracy of the information upon which the decision making process takes place ("...may use accuracy information independent of weather forecast information for decision rules based on accuracy...", Paragraph 0034; "The

system may also be used to evaluate the value of the weather information, e.g. as a function of various accuracies...", Paragraph 0063).

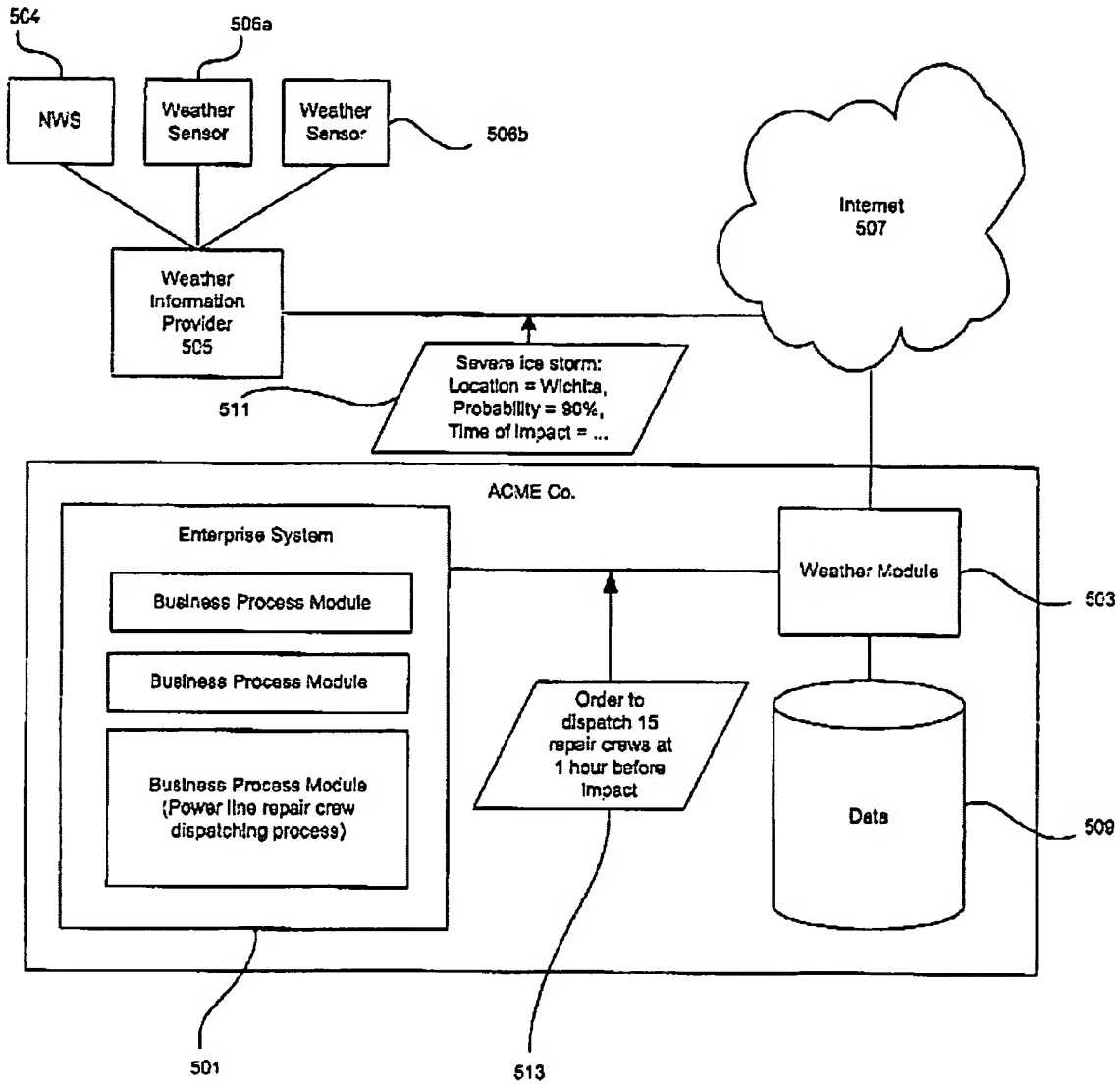

FIG. 5

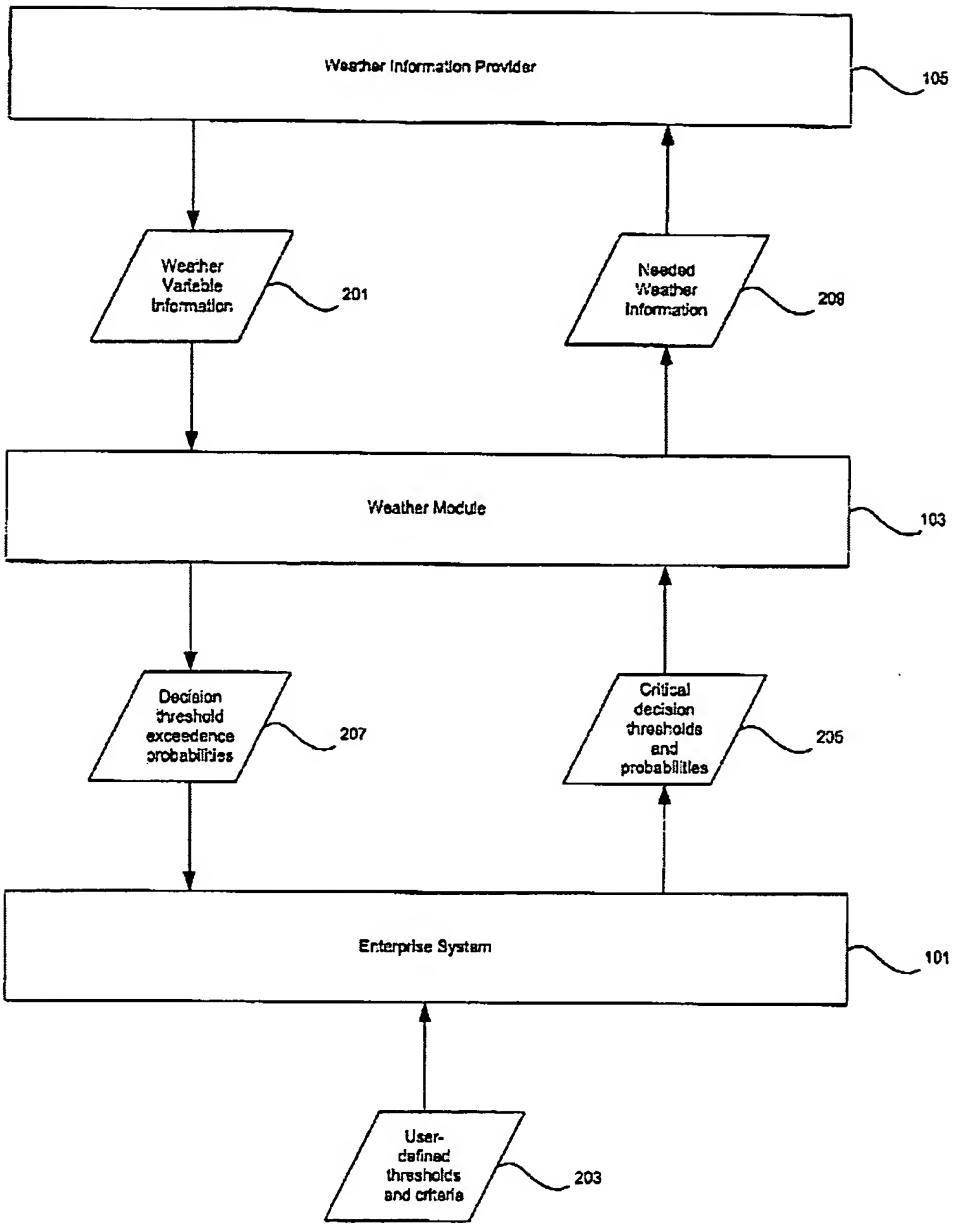

FIG. 2

While Smith et al. teaches that the weather-based decision system and method enables businesses to account for the well-known impact/effect of weather events/elements on the demand for products and/or services (weather driven demand) as well as the effect weather on business activities/processes Smith et al. does not

expressly teach that weather driven data indicates *how* a business activity is influenced by one ore more weather elements as now claimed.

Fox et al. teach utilizing weather-driven product/services demand data (positive/negative impact, increase/decrease sales, retail performance, Column 14, Lines 20-25; Column 20, Lines 18-25; Column 21, Lines 45-50) that indicates *how* a business activity is influenced by one or more weather elements/events (e.g. sales, traffic, etc.; "A configurator (business support engine) coupled to the analyzer, estimates expected future retail performance.", Column 6, Lines 26-28), in an analogous art of weather-based business decisions systems/methods, for the purposes of forecasting future business (retail) performance (Abstract; Column 6, Lines 18-34).

Fox et al. further teach that the weather-based decision system and method analyzes historical business performance in order to predict future business performance (weather decision points; Abstract; Column 4, Lines 18-34; Column 7, Lines 6-36) and further comprises:

- assigning confidence levels (interval, measures, metrics, etc.) to weather-driven data (Column 23, Lines 3-7; Figure 29);

- assigning opportunity levels (scores, counts, values, indices, etc.) to weather driven data (Column 16, Lines 58-68; Column 17, Lines 1-58; Column 23, Lines 45-50; Figure 29) by product, region and the like (Column 20, Lines 18-25 and 65-68; Figures 6, 26);

- identifying weather decision points ("the invention is used to forecast the opportunity of the snow sled market for next January.", Column 7, Lines 25-30; "decision view window", Column 22, Lines 51-60; Figure 29);

- analyzing, via an analyzer subsystem, historical sales (weather-driven demand data) and weather (events, patterns, trends, etc.) data (Column 10, Lines 27-30; ; Figure 1) to determine such things as the positive/negative impact of weather on business performance (Column 14, Lines 20-23); and

- a plurality of databases historical weather, weather patterns, weather forecasts, sales and the like (Figure 3, Element 302).

Fox et al. further teach that it is old and well known that weather drives/impacts nearly all businesses and that businesses inherently use weather-driven (based, influences, etc.) data ("implicitly weather effects are already embedded in MIS POS database...", Column 4, Lines 17-20) when performing well known business planning/management processes ("all retailers must forecast how much inventory to buy and distribute based on expected demand and appropriate inventory buffers" (Column 5, Lines 4-8; i.e. demand/supply chain planning/management).

It would have been obvious to one skilled in the art at the time of the invention that the weather-based decision system and method for providing business recommendations based on a weather driven data as taught by Smith et al. would have benefited from utilizing weather driven demand data that indicates *how (positively, negatively, etc.)* a business activity is influenced by one ore more weather elements in

view of the teachings of Fox et al.; the resultant system providing additional weather-driven (influenced) data into the enterprise planning systems and methods (processes) thereby further enabling businesses to make decisions based on weather information/data (Smith et al.: Paragraph 0007, 0010).

While both Smith et al. and Fox et al. teach assigning confidence levels to a plurality of weather and weather-driven demand data and while the assigning confidence levels to data, especially forecasted/predicted data (e.g. weatherman commonly state there is a XX percent chance of rain today), is old and very well known neither Smith et al. nor Fox et al. expressly teach assigning both a first confidence level, based on a probably that a weather element is accurate and a second confidence level, based on a strength of correlation between a product or service and one or more weather elements as claimed.

Shutovich teach assigning both a first confidence level, based on a probably that a weather element is accurate and a second confidence level, based on a strength of correlation between a product or service and one or more weather elements as part of a commercially available system/method known as Planalytics (Paragraphs 1-7, Page 1; "I have a high degree of confidence – meaning 85-90 percent – that a particular month is going to have 20 percent more days of rain, and I'm also confident that there's a 90-percent relationship between that and the sale of wiper blades.", Paragraph 4, Page 1) in an analogous art of weather-adapted decision systems for the purposes of assisting

clients in making business decisions based on weather-driven demand data and forecasted weather elements (Paragraphs 7-8, Page 1).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for weather-based decisions as taught by the combination of Fox et al. and Smith et al. would have benefited from assigning both a first confidence level, based on a probably that a weather element is accurate and a second confidence level, based on a strength of correlation between a product or service and one or more weather elements in view of the teachings of Shutovich; the resultant system/method enabling users to make business decisions based on weather-driven demand data and forecasted weather elements (Shutovich: Paragraphs 7-8, Page 1).

Regarding Claim 2 Smith et al. teach a weather-based decision system that enables users, as part of the overall enterprise system (computer-based planning systems; e.g. i2, SAP, Oracle, etc.), to view a plurality of information and data related to the management of the business ("integrated view", Paragraph 0003) and that the system can be access/utilized as part of an Internet website (websites implicitly have a graphical user interface; Paragraphs 0058, 0074).

While the utilization of graphical user interfaces are well known in the art for enabling users to efficiently interact with computer systems Smith et al. does not

expressly teach that the weather-based decision system further comprises a graphical user interface.

Fox et al. teach a weather-based decision system and method further comprising a graphical user interface (Abstract; Figures 23-43), in an analogous art of weather-adapted decision systems, for the purposes of forecasting future business (retail) performance (Abstract; Column 6, Lines 18-34).

It would have been obvious to one skilled in the art at the time of the invention that the weather-based decision system and method, with its ability to provide an "integrated view" of the business and availability via the Internet, as taught Smith et al. would have utilized a graphical user interface to provide a convenient mechanism for users to interact with the system in view of the teachings of Fox et al.

Regarding Claim 3 Smith et al. teach a weather-based decision system further comprising an external data (database, data stream, data access/transfer layer, etc.) interface for accessing one or more external data sources ("various weather providers", Paragraph 0017; Paragraphs 0017, 0026-0027, 0034, 0066; Figures 1, Element 107 and Figure 4 below).

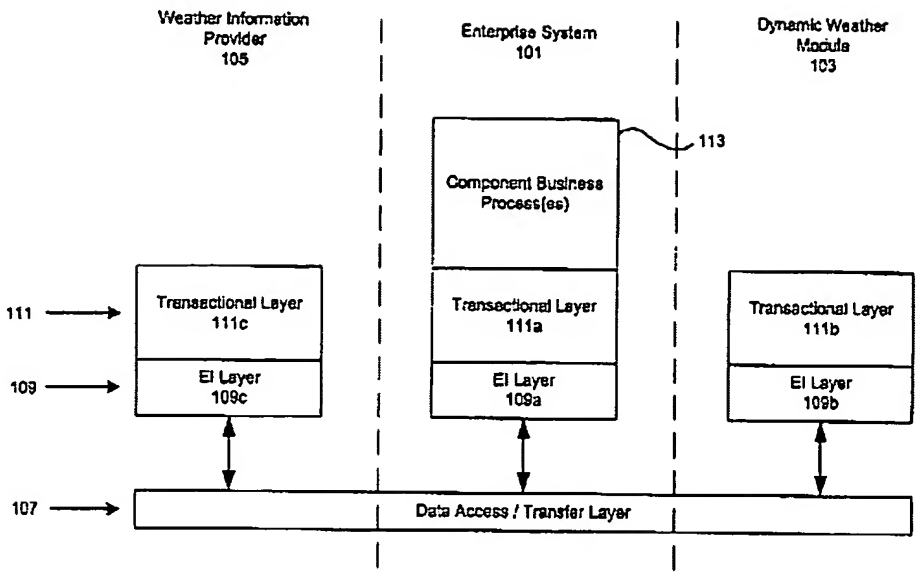
Weather Information Provider 105
Enterprise System 101
Dynamic Weather Module 103
113
Component Business Process(es)
111
Transactional Layer 111c
Transactional Layer 111a
Transactional Layer 111b
109
EI Layer 109c
EI Layer 109a
EI Layer 109b
107
Data Access / Transfer Layer

FIG. 1

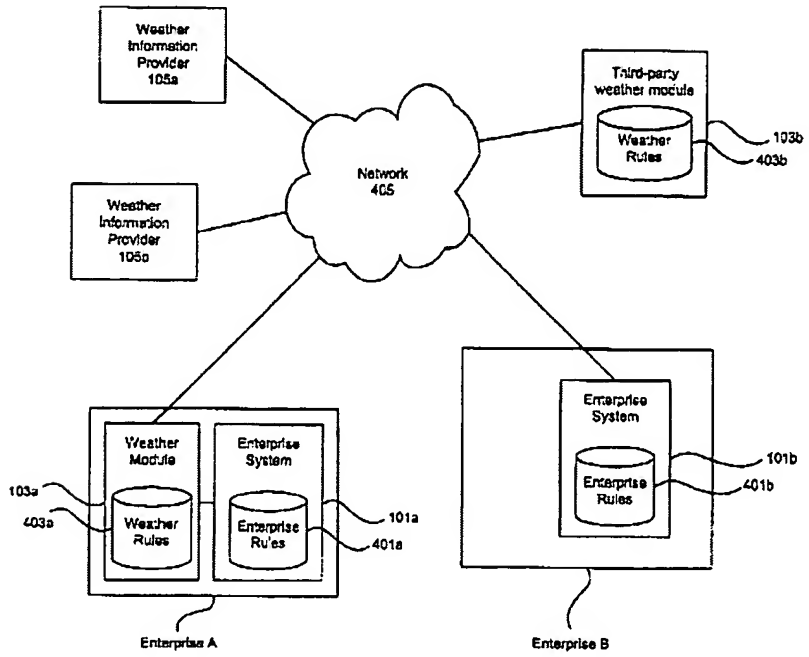
Weather Information Provider 105a
Weather Information Provider 105c
Network 405
Third-party weather module
Weather Rules
103b
403b
Weather Module
Enterprise System
103a
403a
Weather Rules
Enterprise Rules
101a
401a
Enterprise System
Enterprise Rules
101b
401b
Enterprise A
Enterprise B

FIG. 4

Further regarding Claim 3, the weather-based decision system as claimed merely comprises an external database interface (connection, linkage, etc.) that **can** be used to access one or more external databases (data stores, data sources, etc.) however the system as claimed does not actually access any external data. For the purposes of examination examiner assumes the applicant will amend the claim to recite that weather-based system actually connects (interfaces, links, etc.) with one or more external sources of data.

Regarding Claim 6 Smith et al. teach a rules-based weather-based decision system (expert system) wherein weather decision points are generated by examining (comparing, analyzing, reviewing, etc.) a plurality of information (variables, parameters, data, rules, etc.) including but not limited to a weather forecast confidence level (accuracy), the weather forecast (weather information historical and future) and the opportunity level for a weather driven demand data point (Abstract; Paragraphs 0008-0010, 0029, 0031, 0034, 0036; 0039, 0041, 0051; 0046; Figure 2, Element 203).

Regarding Claims 7 and 12 Smith et al. teach a method for generating business recommendations for a business activity based on one or more weather elements (weather-based decision system and method) comprising ("The enterprise may use this information to make advanced informed decisions based at least in part on weather information.", Paragraph 0068; Paragraph 0031):

- receiving a plurality of weather element relationship for a business activity (user thresholds, business rules, weather rules, weather sensitivity; Paragraphs 0024, 0029, 0051);

- receiving weather driven demand for a business activity (Paragraphs 0051; Figures 2, 4 and 5);

- assigning weather element confidence levels (accuracy) to weather driven demand data based on the probability that a weather element forecast is accurate (Paragraphs 0029, 0031, 0034, 0036; 0041, 0051; 0046; Figure 2, Element 203);

- assigning an opportunity (potential sales, potential revenue, competitive forces, profit, business optimization, etc.; Paragraphs 0018-0022, 0061, 0074) measure (levels, metric, value, points, score, etc.) to each of the data points within the weather driven data;

- identifying weather decision points based on opportunity measures (thresholds, user-defined thresholds; Paragraph 0029-0030; Figure 3); and

- generating business recommendations by applying business weather rules (Paragraphs 0010, 0019, 0033, 0072-0074; Figure 3).

Fox et al. further teach that the weather-based decision system and method analyzes historical business performance in order to predict future business performance (weather decision points; Abstract; Column 4, Lines 18-34; Column 7, Lines 6-36) and further comprises:

- assigning confidence levels (interval, measures, metrics, etc.) to weather-driven demand data (Column 23, Lines 3-7; Figure 29);

- assigning opportunity levels (scores, counts, values, indices, etc.) to weather driven data (Column 16, Lines 58-68; Column 17, Lines 1-58; Column 23, Lines 45-50; Figure 29) by product, region and the like (Column 20, Lines 18-25 and 65-68; Figures 6, 26); and

- identifying weather decision points based on the weather element forecasts and weather-driven demand data ("the invention is used to forecast the opportunity of the snow sled market for next January.", Column 7, Lines 25-30; "decision view window", Column 22, Lines 51-60; Figure 29).

While both Smith et al. and Fox et al. teach assigning confidence levels to a plurality of weather and weather-driven demand data and while the assigning confidence levels to data, especially forecasted/predicted data (e.g. weatherman commonly state there is a XX percent chance of rain today), is old and very well known neither Smith et al. nor Fox et al. expressly teach assigning both a first confidence level, based on a probably that a weather element is accurate and a second confidence level, based on a strength of correlation between a product or service and one or more weather elements as claimed.

Shutovich teach assigning both a first confidence level, based on a probably that a weather element is accurate and a second confidence level, based on a strength of

correlation between a product or service and one or more weather elements as part of a commercially available system/method known as Planalytics (Paragraphs 1-7, Page 1; "I have a high degree of confidence – meaning 85-90 percent – that a particular month is going to have 20 percent more days of rain, and I'm also confident that there's a 90-percent relationship between that and the sale of wiper blades.", Paragraph 4, Page 1) in an analogous art of weather-adapted decision systems for the purposes of assisting clients in making business decisions based on weather-driven demand data and forecasted weather elements (Paragraphs 7-8, Page 1).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for weather-based decisions as taught by the combination of Fox et al. and Smith et al. would have benefited from assigning both a first confidence level, based on a probably that a weather element is accurate and a second confidence level, based on a strength of correlation between a product or service and one or more weather elements in view of the teachings of Shutovich; the resultant system/method enabling users to make business decisions based on weather-driven demand data and forecasted weather elements (Shutovich: Paragraphs 7-8, Page 1).

Regarding Claims 10 and 19 Smith et al. teach that the weather-based decision system and method utilizes accuracy measures (levels, values, etc.) of weather related data provided by a plurality of complementary and/or redundant weather information providers as part of the business recommendation process and that the accuracy

measures can be used to evaluate (compare, rate, etc.) the accuracy (value, reliability, uncertainty) of the plurality of weather information/information providers ("The system may also be used to evaluate the value of the weather information, e.g. as a function of various accuracies...", Paragraph 0063; Paragraphs 0024, 0034, 00360037).

Smith et al. does not teach that the weather-based decision system and method internally generates weather element/events predictions/forecasts or subsequently compares those internally generated predictions (forecasts, estimates, etc.) to external (third party, etc.) forecasts (estimates, predictions, etc.) as claimed.

Official notice is taken that comparing internally generated (calculated, determined, estimated, etc.) values (numbers, measures, levels, etc.) to externally (third party, object, etc.) values in order to determine the degree to which the two values correspond (match, correlate, etc.) in old and very well known for providing a mechanism for users/systems to do such things as check/determine the accuracy of their calculations by comparing them to the calculations of others thereby providing a degree of confidence in the forecast/prediction if the two values are close/similar.

It would have been obvious to one skilled in the art at the time of the invention that the weather-based decision system and method with its utilization and evaluation of one or more forecasted weather element/event data from one or more weather information providers would have benefited from internally generating weather

element/event predictions/forecasts in order to assign a confidence/accuracy measure to one or more of the externally/internally predicted/forecasted weather elements/events based on a relationship between a weather element (event) forecast (e.g. external prediction/forecast/estimate for a weather event) and at least one element prediction (system generated weather element forecast/prediction/estimate) in view of the teachings of official notice; the resultant system providing users/businesses of the system a degree of confidence in the forecasted/predicted weather element/event data.

Regarding Claims 11 and 20 Smith et al. teach a weather-based decision system and method wherein at least one of the weather element/event predictions (forecasts, predictions, estimates, etc.) is based on trends (patterns) in weather elements/events measurements (data, information, values, etc.) "...the business process decision system is capable of integration weather information relevant to business processes or making business decisions based on short-term weather forecasts as well as on general weather trends.", Paragraph 0007).

Regarding Claims 13 and 15 Smith et al. teach a weather-based decision system and method wherein the system assigns confidence levels (measures, accuracy, values, points, etc.) to weather information/data and that those confidence levels are utilized to identify business decision points as discussed above. Smith et al. further teach that business rules can be applied to any geographic area (Paragraph 0050).

Smith et al. does not expressly teach the assignment of confidence levels by geographic region (for weather driven) as claimed.

Fox et al. teach the importance of regional/local weather patterns on weather-based decision systems; more specifically teaching the "direct and dramatic" impact local weather elements (events, patterns, trends, etc.) have on business performance/decisions (Column 4, Lines 43-64). Fox et al. further teaches that weather anomalies are almost by definition purely local/regional events rather than national events/elements (Column 4, Lines 1-5).

It would have been that the weather-based decision system and method as taught by Smith et al. would have benefited from assigning confidence measures by geographic region in view of the teachings of Fox et al.; the resultant system taking into account the inherent local/regional nature of weather elements/events by assigning confidence levels/measures based on the geographic area for which the weather data has been provided.

Regarding Claims 14 and 16 Smith et al. teach a weather-based decision system and method wherein the system assigns confidence levels (measures, accuracy, values, points, etc.) to weather information/data and that those confidence levels are utilized for identifying business decision points as discussed above. Smith et al. further teach that the accuracy of weather information varies based on the time period and that

the user may select a time period provides (has) the required accuracy level (forecast time horizon selected/used; Paragraph 0042).

Regarding Claim 17 Smith et al. teach a weather-based decision system and method wherein the system utilizes business rules, stored in a database (matrix, table, etc.) wherein the rules are expressed in/evaluated on a plurality of parameters including but not limited to historical weather information, opportunity measures, confidence measures and the like thereby enabling the system to identify and act upon weather decision points (i.e. business activities influenced by weather; Abstract; Paragraphs 0007, 0017).

Regarding Claim 18 Smith et al. teach a weather-based decision system wherein a plurality of businesses and their associated business processes (products, good, services and the like) are sensitive to weather elements (events, effects; Paragraphs 0004-005, 0008, 0023-0024; "...one or more computer-implement component business processes which are sensitive to the effects of weather.", Paragraph 0023) and that such weather element relationships (relationship or impact of a weather element on a business activity; sensitivity of the business process to weather) are captured as part of the business automation process (Paragraphs 0023, 0049; e.g. airplane flight routing system).

Further Smith et al. teach the utilization of a plurality of accuracy measures (confidence levels) related to weather forecast and non-weather related information as

part of the decision rules (Paragraph 0034) and that the confidence levels (accuracy) enables the system to take into account the accuracy of the information upon which the decision making process takes place ("...may use accuracy information independent of weather forecast information for decision rules based on accuracy...", Paragraph 0034; "The system may also be used to evaluate the value of the weather information, e.g. as a function of various accuracies...", Paragraph 0063).

While Smith et al. teach that the system determines, analyzes and utilizes the correlations/relationships between weather elements and business activities (i.e. weather and business rules embody the sensitivity/correlation/impact between business activities and weather elements) Smith et al. does not expressly teach that a confidence level (measure of accuracy) is assigned based on the strength of the correlation (relationship, sensitivity, impact, etc.) between a product/service (event, decision, process, etc.) being considered and one or more weather elements (events).

Fox et al. teach a weather-based system and method wherein the impact (positive, negative, none) of weather elements on business activities (performance, product's sale) is measured/calculated (score, count, etc.; Column 14, Lines 19-34; Column 16, Lines 60-68; Column 20, Lines 17-25; Column 22, Lines 55-57; Figures 14, 26, 29) and that a confidence level is applied to the correlation between the product and one or more weather elements (Column 23, Lines 1-8).

It would have been obvious to one skilled in the art at the time of the invention that the weather-based decision system and method, with its ability to model and predict business performance, via business and weather rules, based on the sensitivity of business activities to weather and use of a plurality of accuracies as taught Smith et al. would have benefited from modeling (including in the business rules) the strength of correlation between the business activity and one or more weather events/elements in view of the teachings of Fox et al.; the resultant system providing users/businesses an enhanced ability to determine the impact of weather on a plurality of business activities (components, processes, products) in view of the teachings of Fox et al.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Tatum et al., U.S. Patent No. 6,591,255, teach a system and method for assigning and determining confidence levels to forecasted data including but not limited to weather element forecast data and weather driven demand data.

- Billet et al., U.S. Patent Publication No. 2002/0194148, teach a system and method for forecasting (predicting) data (predictive modeling), including but not limited to weather and demand data, wherein forecast accuracy (confidence levels) are used to optimize/refine the forecast.

- Leung et al., Fuzzy Concepts in Expert Systems (1988) teaches the well-known utilization of confidence levels/factors in decision systems (expert systems, artificial intelligence) wherein the uncertainty measures enable such systems to take into account inexact knowledge/information.

- Prior, John, Weather intelligence (1994) teaches the old and well known use of weather element forecasts, demand data and the relationship/correlation between the weather elements and demand data for demand forecasting. Prior further teaches that such systems/methods use triggers/thresholds to identify weather decision points.

- McNeeley, Trent, High-tech weather service aids business planning (2000) teaches a commercially available system and method for assisting businesses in making weather-driven decisions ("We can correlate any business metric that may be related to weather and history and better understand how that metric will behave in the

future."). McNeely further teaches that the accuracy of the forecast and relationships is key.

- Villano, Matt, A Smile Makes a Lousy Umbrella (2000) teaches the old and very well known use of systems/methods for making weather-driven business decisions based on forecasted weather elements. One such system/method includes Planalytics "Dubbed Weathernomics, the new technology uses artificial intelligence modeling of historical sales and weather data to chart consumer behavior over time. In other words, instead of telling clients it will be colder or warmer, Planalytics tells them whether it will be colder or warmer to a degree that drives sales" wherein the system/method is used to "correlate the effects of weather against retail sales by item and location."

- Weather for sale (2002) teaches a system/method for weather-based decisions comprising receiving a plurality of demand and weather data and assigning confidence levels to forecasts.

- Corby, Paul, Weather volatility and power demand (2002) teaches a system/method for making weather-based decisions utilizing a plurality of weather element forecasts, demand data, the correlation/relationship between the weather elements and demand as well as opportunity levels. Corby further teaches that Dr. Irving Kirck initially developed the system/method in the 1960's and that the system/method were sold to Strategic Weather Services (Planalytics) in 1990.

- SmartCorp.com Web Pages (2000-2001) teaches a commercially available system and method for predictive modeling/forecasting wherein the system/method utilizes a plurality of old and very well known predictive models and forecasting

techniques/methods (e.g. correlation analysis) to forecast such things as weather-driven demand (e.g. seasonality). SmartCorp.com further teaches that the system/method assigns accuracy measures to the plurality of forecasts.

- Lucas, Peter, Certainty-Factor-Like Structures in Bayesian Networks (1999) teaches the well known utilization of confidence levels in decision systems (expert, artificial intelligence systems).

- Makridakis, Spyros et al., Forecasting Methods and Applications (1998) teach a plurality of well known forecasting methods and systems wherein such systems utilize a plurality of well known forecasting/predictive modeling techniques such as confidence levels (accuracy measures) and correlation analysis.

- Shim, Jae, Strategic Business Forecasting (2000) teaches a plurality of well known forecasting techniques/methods including but not limited to determining forecast confidence levels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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